

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000275**Date Inspected:** 11-Jul-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

<b>CWI Name:</b>	N/A			<b>CWI Present:</b>	Yes	No	
<b>Inspected CWI report:</b>	Yes	No	N/A	<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A	<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A	<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A	<b>Approved WPS:</b>	Yes	No	N/A
				<b>Delayed / Cancelled:</b>	Yes	No	N/A
<b>Bridge No:</b>	34-0006			<b>Component:</b>	WQT		

**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Bruce Berger was present to observe quality control functions related to welding, testing and fabrication procedures at the Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

Caltrans Quality Assurance (QA) Inspector Bruce J. Berger observed welder qualification testing (WQT) by Moody International Inspectors Feng Lin Yao, Tang Li Pang, Certified Welding Inspector Zhou Daqing and He Jia Min at ZPMC today. There was one ZPMC Certified Welding Inspector, Xu Xian Ping with four assistants and two American Bridge/Fluor employees Mr. Danny McDonald and Certified Welding Inspector Mr. Warren Buehler. There were a total of 58 welders which attempted welder qualification test for yesterday in the shield metal arc (SMAW), submerged arc (SAW) and the flux cored arc (FCAW) welding process. There were of total of 33 FCAW welder tests attempted with only 15 passing final visual inspection, and a total of 20 SMAW tests attempted with only 6 passing final visual inspection and a total of 5 SAW tests attempted with 4 passing final visual inspection. Moody International Certified Welding Inspector Zhou Daqing preformed the final visual inspections. There was one SAW welder who could not answer a question on the SAW process who was not allowed to test and two FCAW welders one of which was a no show and the other who took to long in the opinion of Moody International who are counted in the total number above. Discussions were held between Moody and ABF about why so many welders fail final visual testing. Mr. Buehler of ABF stated that Mr. Zhou of Moody had stated he had failed many tests on appearance alone and not necessarily upon weld height, under-fill or other listed unacceptable conditions. Mr. Buehler further stated that he was going to arrange a meeting between ABF, Moody and ZPMC to discuss these issues. The Moody International, ZPMC and ABF inspectors where observed checking the welding parameters for the welders being tested. A random inspection was made of the various

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volt/amp gauges and temperature gauges for calibration of which all were found to be in a current state of calibration. There was one welder whose weld was found unacceptable by Mr. Warren Buehler of ABF for not performing inter-pass weld cleaning. There was a lengthy discussion between ABF and Moody concerning the requirements for inter-pass cleaning of welder qualification tests.



### Summary of Conversations:

No relevant conversations took place on this date.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Berger,Bruce	Quality Assurance Inspector
<b>Reviewed By:</b>	McClary,David	QA Reviewer

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